Transcript – Why Appropriate Assessment Assignment is Needed

It is important that students are appropriately assigned to a diagnostic assessment. If the assessment is **appropriately** assigned, it will provide valid interpretations about students' understanding of pre-algebra-related content. It should also be able to diagnose students' misconceptions and errors and give teachers insight to student understanding of specific content. This, in turn, will provide valuable information for making instructional decisions for your students.

If **inappropriately** assigned, it could provide the teacher with invalid interpretations. It could guide the teacher to make incorrect decisions about the students' understanding and have limited use for making instructional decisions.

The next two videos will provide more information on how to decide which diagnostic assessment a student should take. We will also see a video of a teacher discussing her decisions in assigning some of her students.

Transcript – Diagnostic Decision Tree

You have decided to give an MSTAR diagnostic assessment to help you understand why a student is struggling. At this point you may be asking yourself, "How do I know which of the five diagnostic assessments each student should take?" Let's take a look.

As you work through the decision tree, keep two things in mind. First, deciding which assessment each student should take is ultimately up to you, the teacher. Second, the MSTAR diagnostic assessment Decision Tree is a guide and should be used along with your knowledge about the student. It is important to consider the student's previous work on assessments and homework. You should also consider which material has been or is currently being taught in class as well as the content that will be taught in the near future.

Also, remember that these assessments are based on the MSTAR Learning Progressions. LP_RN.A, B, and C focus on content related to rational numbers. LP_VE.A and B are focused on equations and expressions. Refer to the MSTAR diagnostic assessment Guide for a more in-depth description of the mathematical content on each assessment.

Now let's walk through the decision tree.

The first question we must answer is "Has the student taken the MSTAR Universal Screener?" The screener identifies students as being at risk or on track for meeting algebra-readiness expectations. The data from the screener helps identify students who may need to take an MSTAR diagnostic assessment.

Students must first take the MSTAR Universal Screener before they can be assigned an MSTAR diagnostic assessment.

The MSTAR diagnostic assessments are designed for students who are at risk for not meeting algebra-readiness expectations. Therefore, not every student will take a diagnostic assessment.

Based on their performance on the MSTAR Universal Screener, students are placed in a performance level, or tier, on the RtI Pyramid.

What was the student's performance level or tier?

If a student was placed in Tier 1A, that student is considered to be on track for being ready for algebra. The student needs minimal to no additional instructional support beyond the core instructional program. However, this student may still benefit from differentiated instruction and strategic review to reinforce proficiency.

Students in Tier 1B may be on the border of needing more instructional support in order to be ready for algebra. It is your job as the teacher to decide if a student in Tier 1B should take an MSTAR diagnostic assessment. Gather additional evidence from other assessments and homework to determine if an MSTAR diagnostic assessment is necessary for these students.

If you determine that an MSTAR diagnostic assessment is not necessary, the student will continue in regular core instruction and will not take an additional assessment during this administration.

However, if you decide that the student will take an MSTAR diagnostic assessment, continue to work through the decision tree to determine which assessment to assign.

A student who is not in Tier 1A or 1B is in Tier 2 or Tier 3. Students in these tiers are at risk for not meeting algebra-readiness expectations and need additional support. MSTAR diagnostic assessments are designed for these students. It is recommended that all students in Tier 2 and Tier 3 (i.e., Tier 2A, 2B, 3A, and 3B) take an MSTAR diagnostic assessment.

Based on a student's performance on the MSTAR Universal Screener, you have determined that the student should take an MSTAR diagnostic assessment. The next question on the decision tree focuses on mathematical content. What content does the student struggle with, or what content are you currently focusing on in your classroom?

There are two options based on the content of the diagnostic assessments: rational numbers or variables and expressions.

If you want to focus on rational numbers, the next question to consider is "Has the student mastered representing positive rational numbers?" You can find a deeper description of this topic in the MSTAR diagnostic assessment Guide, but generally this topic includes finding equivalent fractions, working with decimals, comparing fractions, and converting between different representations of rational numbers.

If the student has mastered these concepts, that student will take assessment LP_RN.C.

If the student has not mastered these concepts, move to the next question: "Does the student understand fractions, such as magnitude, equal partitioning, and decomposing?"

If the student has not mastered these concepts, that student will take assessment LP_RN.A. If the student has mastered these concepts, that student will take assessment LP_RN.B.

If you want to focus on variables and expressions, the next question to consider is "Is the student able to evaluate and simplify expressions?" Concepts within this topic include variables as unknown quantities, evaluating expressions, verbal translations of expressions, and simplifying expressions.

If the student has not mastered these concepts, that student will take assessment LP_VE.A. If the student has mastered these concepts, that student will take assessment LP_VE.B.

The MSTAR diagnostic assessments are based on the mathematical content from the MSTAR Learning Progressions and is not specific to certain grade levels. There may be a student in seventh grade who struggles because of a persistent misconception that can be traced back to the fourth grade. While these assessments are not based on grade levels, we do recommend specific diagnostic assessments be given at certain times. These recommendations are found on the decision tree document. Please use these recommendations in addition to the rest of the decision tree as a guide when assigning your students to an MSTAR diagnostic assessment.

Transcript – Diagnostic Decision Tree (continued)

Student 1:

Student 1 was a sixth grade student performing in the middle of his class. Based on my own observation and assessment results, he was placed as Tier 2B on the MSTAR Universal Screener. I worked with him throughout the year, but not extensively. I knew he struggled without support, but he seemed to be motivated. I chose for him the assessment RN.B, Representations of Positive Rational Numbers, because I thought he had gaps at that level that I may not have detected. Via this assessment, I'd be able to gain specific information to give him additional, efficient help. He completed the assessment with high success! I thought that he would struggle more than he did. Looking back, I could have administered the higher level of Rational Numbers skills to get more specific data on the kind of support that he needed. As a result of my miscalculation, he aced his assessment, and his results indicated no additional support was needed. Testing him at a higher level might have given me more information that would have provided more purpose to his learning.

Student 2:

Student 2 was placed as Tier 2A on the MSTAR Universal Screener. She struggled some during the year, but she seemed very motivated. She was most successful on shorter assignments. I was aware of her gaps, but I didn't think she performed poorly enough that she needed the lower level assessment. I administered the assessment RN.C, Applications of Positive Rational Numbers. She finished in record time, which indicated she had answered so many problems wrong that the stopping rule took effect! Her results didn't provide information I could use to support her in the classroom. If I had taken a closer

look at her work on assignments, I probably would have administered a lower level assessment and gotten a better knowledge of which key concepts she was missing.

Student 3:

Student 3 was not motivated in the classroom at all. He was placed as Tier 2B on the MSTAR Universal Screener, so I chose the assessment RN.C, Applications of Positive Rational Numbers. I was hoping to get an idea of the areas in which he may need support and intervention. This was quite beneficial for me because it gave me specific information on which areas I could supplement for him in the classroom. This allowed me to provide purposeful individualized instruction.

Transcript – Student Examples

As in the examples, you may know you misassigned the assessment in two ways. First, if the results do not align with your own observations about the student's strengths and opportunities, you may have misassigned the assessment. Second, you may have misassigned the assessment if useful information is not generated from the report. This could happen if the student does not respond correctly to any items or if he responds correctly to all items.

We are going to see if we can correctly assign students to an MSTAR diagnostic assessment. Have your decision tree and assessment guide available.

Sarah is a sixth grade student. She took the MSTAR Universal Screener in the spring and was classified as Tier 3A. This means that she needs intensive intervention and should take an MSTAR diagnostic assessment during the spring testing window to help pinpoint her strengths and opportunities. Sarah understands basic fraction concepts but has difficulty generating different forms of and applying rational numbers, which is reflected in her grades. Because of this, her teacher knows that she will need to take either LP.RN.A, LP.RN.B, or LP.RN.C. Sarah has not mastered representing positive rational numbers because she struggles with equivalent fractions and decimals as well as comparing fractions and decimals. However, she does understand equal partitioning and decomposition. The most appropriate assessment to assign will likely be LP.RN.B: Representations of Positive Rational Numbers.

Read over the summary of this student, and take a look at his work. Which assessment would you assign him to?

Damian is an eigth grade student. He took the MSTAR Universal Screener in the fall and was classified as Tier 2A. This means that he needs strategic support and should take the MSTAR diagnostic assessment during the fall testing window to help pinpoint his strengths and opportunities. Damian works well with positive rational numbers but is currently struggling with equations and expressions in the classroom, which can be seen by examining his grades on homework and assessments. Because he does not struggle with rational numbers but instead has difficulty with equations and expressions, he should either take LP.VE.A or LP.VE.B. We can also analyze his work to better understand the concepts he

struggles with. Since he is not proficient with simplifying expressions, the most appropriate assessment to assign will likely be LP.VE.A: Variables and Expressions.

Read over the summary of this student, and take a look at her work. Which assessment would you assign her to?

Julie is a fifth grade student. She took the MSTAR Universal Screener in the fall and winter and was classified as Tier 1A in the fall and 1B in the spring. Even though this means that she only needs minimal to no additional support, her teacher has noticed that her performance has declined over time. Since she is in Tier 1, she doesn't necessarily need to take the MSTAR diagnostic assessment. More information should be gathered from classroom observations, grades, and student work to determine if a diagnostic is necessary. After looking at Julie's averages for the first three six weeks, her teacher decided that Julie should take a diagnostic assessment to see if she could figure out what was going on. Since her class hasn't covered variables and expressions, Julie should likely either take LP.RN.A, LP.RN.B, or LP.RN.C, depending on which area of rational numbers she struggles with. After examining her class work, her teacher noticed that Julie has difficulty with operations with rational numbers, so she decided to assign Julie to LP.RN.C: Applications of Positive Rational Numbers.

Take a moment to look at your own Universal Screener reports. Based on this data as well as other data sources you have collected, use the decision tree to decide which students you would assign to an MSTAR diagnostic assessment.

Using the decision tree, take a moment to begin to think about which assessment each student would take.

In your notebook, jot down your thoughts about two students in particular. Then, write down which assessment you chose for each student and why.

Pick one of those students, and write your thoughts and reasoning on the discussion board.